

Claims

- [c1] 1. A component part container delivery rack system for use in manufacturing operations, comprising:
a component part container;
at least one dolly for supporting the component part container, the dolly having a plurality of wheels for moveably supporting the dolly;
a frame having a front end and a back end and having at least two compartments that are open on at least one side that extends between the front and back ends, the frame being supported on a plurality of wheels; and
a locking element that engages one of the dollies to lock the dolly into one of the compartments when the dolly is transported by the frame, wherein each dolly is configured to be removably received in one of the compartments.
- [c2] 2. The system of claim 1 wherein the frame has an E-shaped base and defines two compartments.
- [c3] 3. The system of claim 1 wherein the locking element is a pivoting lever disposed adjacent the compartments that is pivoted between a locked position and an unlocked position.
- [c4] 4. The system of claim 3 wherein an actuator engaged by the dolly shifts the locking element to the locked position when the dolly is inserted into the compartment.
- [c5] 5. The system of claim 3 wherein a manual actuator is provided on the frame for shifting the locking element between the locked and unlocked positions.
- [c6] 6. The system of claim 1 wherein a plurality of guide elements are provided on the frame for guiding movement of the dollies into and out of the compartments.
- [c7] 7. The system of claim 6 wherein the guide elements lift the dolly as it is inserted into the compartment so that the plurality of wheels on the dolly are lifted off the ground when the dolly is disposed in the compartment.
- [c8] 8. The system of claim 6 wherein the guide elements are rollers secured to the

frame.

- [c9] 9. The system of claim 6 wherein each of the dollies are formed of polymeric material and have hard inserts that engage the guide elements.
- [c10] 10. The system of claim 1 wherein each of the dollies have a platform deck having a plurality of pockets, wherein each of the pockets is configured to receive one of the plurality of wheels of another dolly stacked on top of the dolly.
- [c11] 11. The system of claim 1 wherein each of the dollies has a platform deck comprising an upper surface that is supported by a honeycomb body.
- [c12] 12. A method of stocking a production line using a motorized truck having a towing adapter and a plurality of trailers having wheels that are provided with a towing hook and a hook receiver respectively on one of a front end or a back end, each trailer having two sides extending between the front and back ends, the trailers being accessible from at least one of the two sides to load a plurality of platforms having wheels onto the trailers for transporting a plurality of wheeled platforms on the trailers, the method comprising:
loading a first set of wheeled platforms loaded with a plurality of parts onto the trailers from the side;
transporting the trailers with the first set of wheeled platforms and parts carried thereby to the production line;
unloading the first set of wheeled platforms one at a time from the side of the trailers; and
loading a second set of empty wheeled platforms onto the side of the trailers one at a time to replace the first set of wheeled platforms.
- [c13] 13. The method of claim 12 wherein the towing hooks and hook receivers are not unhooked as the first and second sets of wheeled platforms are loaded and unloaded.
- [c14] 14. The method of claim 12 wherein the loading and unloading steps are performed by rolling the first and second sets of wheeled platforms onto and off of the trailers through an opening in the side of the trailers.

- [c15] 15. The method of claim 12 wherein during the step of transporting the wheeled platforms the wheels thereof are raised above the surface of the floor.
- [c16] 16. The method of claim 12 further comprising the step of locking the wheeled platforms to the trailers to prevent transverse movement of the wheeled platforms relative to the trailers after each of the loading steps.
- [c17] 17. The method of claim 16 further comprising unlocking the wheeled platforms prior to the unloading step to permit the wheeled platforms to be transversely moved relative to the trailers during the unloading step.
- [c18] 18. The method of claim 12 further comprising lifting the wheeled platforms during the loading steps and lowering the wheeled platforms during the unloading step.
- [c19] 19. A production line part stocking trailer assembly, comprising:
a rack supported on a first set of wheels, the rack having a towing adapter at one end for attachment to a tow motor truck or another rack, the rack having a side opening and supporting members on opposite edges of the side opening;
a dolly having a second set of wheels, the dolly being adapted to be inserted and removed through the side opening and selectively carried by the rack, the dolly being temporarily disposed on the supporting members when carried by the rack with the second set of wheels being spaced from the ground.
- [c20] 20. The production line part stocking trailer assembly of claim 19 wherein the rack and dolly have a locking mechanism for selectively locking the rack and dolly together when the dolly is carried by the rack.
- [c21] 21. The production line part stocking trailer assembly of claim 20 wherein the locking mechanism is a lock that is automatically engaged to lock the dolly into the rack but does not completely span the side opening.
- [c22] 22. The production line part stocking trailer assembly of claim 19 wherein the supporting members are a plurality of rollers disposed on each edge of the side opening that are engaged by cooperative portions of the dolly that ride upon the rollers as the dolly is inserted and removed through the side opening.

[c23] 23. The production line part stocking trailer assembly of claim 19 wherein the rack has an E-shaped base having two side openings on one side and wherein the rack is adapted to carry two dollies.